Claims

1. A glass for use in chemical reinforcement for use in a substrate of an information recording medium, having a composition comprising, denoted as mol%:

SiO_2	47 to 70 %
Al_2O_3	1 to 10 %

(where the total of SiO_2 and Al_2O_3 is 57 to 80 %)

CaO	2 to 25 %
BaO	1 to 15 %
Na_2O	1 to 10 %
K_2O	0 to 15 %

(where the total of Na_2O and K_2O is 3 to 16 %)

ZrO_2	1 to 12 %
MgO	0 to 10 %
SrO	0 to 15 %

(where the ratio of the content of CaO to the total of MgO, CaO, SrO, and BaO is greater than or equal to 0.5)

ZnO	0 to 10 %

(where the total of MgO, CaO, SrO, BaO, and ZnO is 3 to 30 %)

TiO_2	0 to 10 %

and the total content of the above-stated components is greater than or equal to 95 %.

2. The glass for use in chemical reinforcement of claim 1 characterized in that the ratio of the BaO content to the total content of MgO, CaO, SrO, and BaO is greater than or equal to 0.15.

3. A glass for use in chemical reinforcement for use in the substrate of an information recording medium employed in a perpendicular magnetic recording system, in which the glass exhibits the glass transition temperature is greater than or equal to 600°C.

4. The glass for use in chemical reinforcement of any of claims 1 to 3 which has a Young's modulus of greater than or equal to 75 GPa.

5. A substrate for use in an information recording medium characterized by consisting of the glasses of any of claims 1 to 4 and being chemically reinforced.

6. The substrate for use in an information recording medium of claim 5 which employs a chemically reinforced glass in which the bending strength following heating for two hours at 570°C to is greater than or equal to 15 kgf/mm^2.

7. A substrate for an information recording medium characterized by consisting of a chemically reinforced glass having a glass transition temperature of greater than or equal to 600°C and exhibiting a bending strength following heating for two hours at 570°C of greater than or equal to 15 kgf/mm^2.

8. The substrate for an information recording medium of any of claims 5 to 7 in which, when the bending strength of the glass constituting the substrate prior to chemical reinforcement is denoted as f_b and the bending strength of the glass when maintained for two hours at a temperature T [°C] (where T denotes any temperature of from 20 to 570°C) after having been chemically reinforced is denoted as f_T, the value of $(f_T-f_b)/f_b$ is greater than or equal to 0.5.

9. The substrate for use in an information recording medium of claim 8, wherein the value of $(f_{20}-f_b)/f_b$ for the bending strength f_{20} at T=20°C is greater than or equal to 1.

10. The substrate for use in an information recording medium of any of claims 5 to 9, wherein the average coefficient of linear expansion at 30 to 300°C of the glass constituting the substrate is greater than or equal to 60 x $10^{-7}K^{-1}$.

11. The substrate for use in an information recording medium of any of claims 5 to 10 that is chemically reinforced by an ion exchange treatment in which sodium ions are replaced with potassium ions.

12. The substrate for use in an information recording medium of any of claims 5 to 11 that is employed as a substrate for an information recording medium employed in a perpendicular magnetic recording system.

13. An information recording medium characterized by comprising an information recording layer on the substrate for an information recording medium of any of claims 5 to 11.

14. The information recording medium of claim 13 that is a magnetic recording medium employed in a perpendicular magnetic recording system.

15. The information recording medium of claim 13 or 14 characterized by being manufactured by subjecting a substrate having an information recording layer to a heat treatment at a maximum temperature of 300 to 600°C.

16. A method of manufacturing an information recording medium comprising a step of forming a multilayered film comprising an information recording layer on the substrate for an information recording medium of any of claims 5 to 11, characterized by further comprising the heating of the substrate on which the multilayered film has been formed to a temperature of from 300 to 600°C.